

## Amendment to the Specification

On page 4, please amend the "Brief Description of the Figures" at lines 5-15 as follows:

Figure 1 shows preferential outgrowth of p18<sup>-/-</sup> hematopoietic cells, as compared to p18<sup>+/+</sup> cells), during long-term engraftment after primary competitive bone marrow transplantation ("cBMT").

Figure 1a demonstrates a semi-quantitative PCR performed on bone marrow cells from p18<sup>+/+</sup> mice and p18<sup>-/-</sup> mice that were mixed at different cell ratios. Figure 1a further demonstrates a standardization based on the correlation between the relative intensity of p18<sup>-/-</sup> signal in total and the percentage of p18<sup>-/-</sup> cells in the mixed population.

Figure 1b demonstrates the converted percentages of p18<sup>-/-</sup> cells in the blood.

Figure 2 shows sustained multi-potentiality and dominance of the regenerated p18<sup>-/-</sup> hematopoietic stem cells (HSCs) after secondary competitive bone marrow transplant.

Figure 2a demonstrates a semi-quantitative PCR performed after secondary competitive bone marrow transplantation (cBMT).

Figure 2b demonstrates percentages of each lineage in blood for transplanted mice (BMT) compared to non-transplanted mice (WT).

Figure 2c demonstrates semi-quantitative PCR for genotypic analysis of each lineage in p18<sup>+/+</sup> and p18<sup>-/-</sup> mice.

Figure 3 shows enlarged pool size of HSCs in p18<sup>-/-</sup> mice under steady-state conditions and enhanced regeneration of p18<sup>-/-</sup> HSCs following the HSC transplantation.

Figure 3a demonstrates the frequency and absolute number of CD34-LKS cells in marrow of p18<sup>+/+</sup> mice compared to p18<sup>-/-</sup> mice.

Figure 3b demonstrates increased competitive reconstitution units (CRU) of p18<sup>+/+</sup> HSCs compared to p18<sup>-/-</sup> HSCs at 5 weeks (5W) and 14 weeks (14W).

Figure 3c demonstrates the repopulating ability of the test cells as determined by the ratios of CD45.2 to CD45.1/CD45.2 cells in blood at 5 weeks (5W) and 14 weeks (14W) after transplantation in p18 +/+ mice compared to p18 -/- mice.

Figure 3d demonstrates the percentage of donor-derived cells in multiple lineages (GM, T, B) of p18 +/+ and p18 -/- cells.

Figure 4 shows direct evidence of increased divisions of p18 -/- HSCs *in vivo*.

Figure 4a demonstrates a level of cell division for p18 +/+ cells compared to p18 -/- cells.

Figure 4b demonstrates the relative precursor frequency for Lin+, Lin-Sca-1-, and Lin-Sca-1+ cells in p18 +/+ mice compared to p18 -/- mice.